

# NATIONAL IMAGINATION COMPUTER CLUB

# 515 Shadylane-Barrington-Illinois-60010

APRIL 1982

Welcome to the third edition of the newsletter for the imagination machine. In order to have a really good newsletter, we need input from the members, both programs and helpful hints. So, please, contribute your games, answers to questions you have had or answers to those we will list in the newsletter. Also, if you send in programs, we would appreciate them in tape form, they will be returned to you if requested, but we do not have enough time to type all of the program listings and we are currently having problems with some of them not working once we have keyed them in, especially those that are handwritten.

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## ANSWERS TO CLUBMEMBER QUESTIONS

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To Chris Phillips

1. Your question regarding a direct connect modem puzzles us, there is an SI-232 serial interface which can be used to interface with a modem or a printer. This interface has only one port to connect to either the printer or modem. There are adaptors sold that would take the SI-232 and creat two plugs for both the printer and the modem, however this just wastes time from plugging and replugging, the computer does not understand if the modem and printer would both be running at the same time. We currently have two disk drives and a printer hooked up to our APF with two slots still empty.
2. We do not think you can hook a monitor up to the APF. Our resolution with our TV is really pretty good. If you are using the computer more for business, we recommend switching to a black and white TV as they give better resolution.
3. The basic in ROM does have the disk commands and the printer commands built in.

Answers to Mr. Phillips (continued)

4. The machine is configured only to accept an additional 8K of ram. This is a design limitation and not a limitation of the 6800 chip which will address 64K.
5. We have to get a maintenance manual to answer your last question. So hold that one until the next month.

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To HJT

1. We are not familiar with the teletype models you mentioned however if it is RS-232 compatible, you can interface through the SI-232 port.

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To Gregory Carroll

1. by the sounds of you'r problem, you may have a power problem. It sounds like you are loosing power to the computer which would cause it to go fuzzy and reset itself.

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FROM OTHER CLUBMEMBERS

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1. From Don Schmidt, author of the Checkers program, line 620 should be corrected as follows:  
  
620 SB=SB+16;SX=SB+7;NEXT X;RETURN;REM NEXT BLOCK
2. for those members interested in writing in machine language, Don recommends "BASIC MICROPROCESSORS AND THE 6800". It retails for \$14.95, however, he stated it can be obtained from the distributor at a reduced price:

Hayden Book Company Inc.  
c/o Transworld Distribution Services  
80 Northfield Avenue  
Edison, NJ 08871  
Attn: Lorraine Corsey

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# QUESTIONS TO OTHER MEMBERS

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1. If anyone is writing programs that would make the computer act like a calculator like sin(x), logx, scientific notations please send us the program. We have a member who is looking for this type of help.
2. Does anyone have a program to check out the RAM?

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If anyone would like to be contacted by other clubmembers, just send us your name, and address and we will publish it. If it is regarding one specific item, i.e. help with machine language, just let us know that and we will indicate it. Likewise, you you have anything you think is worth selling to other clubmembers, just let us know and we will also advertise for you. If you need to know just how good a program is, you can send us a copy for evaluation, we will try it out and return it to you with our comments. Remember, if you have programs to sell, documentation is very important (as we all find out while trying to understand the APF computer).

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# PROGRAMS FROM OTHER CLUB MEMBERS

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## PHANTASMAGRAM

.....from dan Ferguson of Virginia

This program runs random shapes on the screen with movement.

```
1 REM -DAN FERGUSON
10 POKE 24576,54
20 CALL 17046
30 FOR A=216 TO 1 STEP -1
40 C= INT ( RND (0)*129)+128:Z= INT ( RND (0)*129)+128
46 READ R
50 FOR B=812 TO 1023 STEP A
54 POKE B-32,C: POKE B+32,C: POKE B-1,Z
60 POKE B,R: POKE B+1,Z: NEXT B
70 CALL 17046: NEXT A: GOTO 20
80 DATA 143,159,175,191,207,223,239,255:RESTORE
```

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# ALPHABETIZER

.....from ???? there was no name on the  
program, if you would like to let us  
know who wrote this, we will publish  
it next month with another mystery  
written program.

```

1 REM -THIS PROGRAM WILL ALPHABETIZE A LIST OF UP TO 50 WORDS.**
2 REM -EACH WORD CAN CONTAIN UP TO 15 LETTERS,NUMBERS OR COMBINATION OF LETTE
RS AND NUMBERS.**
3 DIM K$(1)
5 POKE 24578,54
10 CALL 17046
20 INPUT "ENTER THE NUMBER OF WORDS TO BE ALPHABETIZED",N
30 DIM A$(49,15)
35 DIM T$(1,15)
40 FOR X=1 TO N: PRINT "ENTER WORD NUMBER";X: INPUT A$(X,0)
50 PRINT : PRINT
55 NEXT X
60 FOR X=1 TO N: PRINT A$(X,0): NEXT X
70 PRINT : PRINT
80 FOR I=1 TO N
90 FOR J=1 TO N-1
100 IF A$(J,0)>A$(J+1,0) THEN GOTO 110
102 GOTO 140
110 T$(1,0)=A$(J,0)
120 A$(J,0)=A$(J+1,0)
130 A$(J+1,0)=T$(1,0)
140 NEXT J
150 NEXT I
160 FOR X=1 TO N: PRINT A$(X,0): NEXT X
180 END

```

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# AGE

.....from GREG LONGFIELD of Illinois

```

10 POKE 24578,54: CALL 34061
20 CALL 17046: POKE 40961,0
30 DIM Z$(1)
40 INPUT "HOW OLD ARE YOU IN YEARS",A
50 B=365: C=24
60 PRINT : PRINT : PRINT "YOU ARE APPROX."
70 MUSIC "103050*10 50+10000"
80 PRINT A#B#C
90 PRINT "HOURS OLD"
100 PRINT : PRINT : PRINT "BY THE APP MACHINE"
110 PRINT : PRINT : INPUT "TRY AGAIN Y/N ",Z$
120 IF Z$="" THEN CALL 17046: END
130 IF Z$="N" THEN CALL 17046: END
140 IF Z$="Y" GOTO 10
150 IF Z$<>"Y,N" GOTO 110

```

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COLORS & SHAPES

.....FROM LOUIS POOL, OCOLA, FLORIDA

5 REM \*SHAPE AND COLOR TESTS\* L. DOOLEY\*

10 CALL 17046

15 FOR F=1 TO 8

20 COLOR =F-1

30 X=15:Y=7:D=1:I=1:M=1:P=1

40 SHAPE =1: PLOT X,Y

41 SHAPE =2: PLOT X+I,Y

42 SHAPE =4: PLOT X,Y+P

43 SHAPE =8: PLOT X+I,Y+P

44 GOSUB 300

45 I=I+1:P=P+1

50 SHAPE =1: PLOT X-D,Y-M

51 SHAPE =2: PLOT X+I,Y-M

52 SHAPE =4: PLOT X-D,Y+P

53 SHAPE =8: PLOT X+I,Y+P

54 GOSUB 300

60 FOR K=1 TO 6

65 D=D+2:I=I+2:M=M+1:P=P+1

66 SHAPE =1: PLOT X-(2\*M),Y

67 SHAPE =4: PLOT X-(2\*M),Y+P-M

68 SHAPE =2: PLOT X+(2\*M)+1,Y

69 SHAPE =8: PLOT X+(2\*M)+1,Y+P-M

70 SHAPE =1: PLOT X-D,Y-M

71 SHAPE =2: PLOT X+I,Y-M

72 SHAPE =4: PLOT X-D,Y+P

73 SHAPE =8: PLOT X+I,Y+P

75 SHAPE =1: PLOT X,Y-M

76 SHAPE =2: PLOT X+I,Y-M

77 SHAPE =4: PLOT X,Y+P

78 SHAPE =8: PLOT X+I,Y+P

80 GOSUB 300

90 NEXT K

100 NEXT F

105 CALL 17026

110 CALL 17046

112 H=0

115 FOR W=0 TO 7

120 R=0

125 FOR F=0 TO 7

130 S=0:V=0

140 FOR K=0 TO 15

150 COLOR =K+H: SHAPE =S: PLOT K+V,R

160 GOSUB 300

170 S=S+1:V=V+1

180 NEXT K

190 R=R+2

COLOR & SHAPES (continued)

```

195 NEXT F
200 H=H+1
210 NEXT W
215 CALL 17026
220 GOTO 10
300 FOR N=1 TO 5:A=0:A=1: NEXT N: RETURN
350 ON F GOTO 371,372,373,374,375,376,377,378
371 MUSIC "10000": GOTO 380
372 MUSIC "20000": GOTO 380
373 MUSIC "30000": GOTO 380
374 MUSIC "40000": GOTO 380
375 MUSIC "50000": GOTO 380
376 MUSIC "60000": GOTO 380
377 MUSIC "70000": GOTO 380
378 MUSIC "810000"
380 RETURN
999 END

```

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JACKPOT

.....FROM JIM NEWMAN & STEPHEN GREENE OF CALIFORNIA

```

CALL 17046: POKE 24578,38
* INPUT "GIVE CASHIER MONEY IN QUARTERS",Y
2 CALL 17046: PRINT " JACK POT": MUSIC C"1234567 7 654321"
9 Y=Y-1: CALL 17046
10 PRINT "TRY YOUR LUCK"
11 PRINT : PRINT : PRINT
12 PRINT "*****": REM THERE ARE 30 STARS
20 PRINT : PRINT : PRINT
30 PRINT "*****": REM IN THIS LINE THERE ARE 30 STARS
ARS
31 GOSUB 8000
32 PRINT "GAME IN SESSION": REM THIS IS TO TELL YOU THE COMPUTER IS READY TO
START
40 IF KEY$ (1)="S" THEN 50: REM PUSH DOWN TO KEEP GOING
41 GOTO 40
50 A= INT (4* RND (X)+1)
51 B= INT (4* RND (X)+1)
52 C= INT (4* RND (X)+1)
53 L=6:P=2
54 MUSIC "7"
55 D=L*32+P+512
56 POKE 40960,C/256
57 POKE 40961,D- INT (D/256)*256
58 MUSIC "/1"
59 IF A=1 THEN PRINT "CHERRY"
60 IF A=2 THEN PRINT "LIME"
70 IF A=3 THEN PRINT "LEMON"
80 IF A=4 THEN PRINT " "

```

## JACKPOT (continued)

```

90 IF KEY$ (1)="-S" THEN 100: REM      PUSH DOWN TO KEEP GOING
91 GOTO 90
100 L=6:P=13: MUSIC "#7"
101 D=L#32+P#512
102 POKE 40960,D/256
103 POKE 40961,D- INT (D/256)#256
104 MUSIC "/1"
105 IF B=1 THEN PRINT "CHERRY"
106 IF B=2 THEN PRINT "LIME"
107 IF B=3 THEN PRINT "LEMON"
108 IF B=4 THEN PRINT ""
109 IF A=1 THEN PRINT "A"
110 IF A=2 THEN PRINT "B"
111 IF A=3 THEN PRINT "C"
112 IF A=4 THEN PRINT "D"
113 IF C=1 THEN PRINT "CHERRY"
114 IF C=2 THEN PRINT "LIME"
115 IF C=3 THEN PRINT "LEMON"
116 IF C=4 THEN PRINT ""
117 IF B=1 THEN PRINT "B"
118 IF B=2 THEN PRINT "C"
119 IF B=3 THEN PRINT "D"
120 IF B=4 THEN PRINT "A"
121 GOTO 100
120 L=6:P=23
121 MUSIC "#7"
122 D=L#32+P#512
123 POKE 40960,D/256
124 POKE 40961,D- INT (D/256)#256
125 MUSIC "/1"
126 IF C=1 THEN PRINT "CHERRY"
127 IF C=2 THEN PRINT "LIME"
128 IF C=3 THEN PRINT "LEMON"
129 IF C=4 THEN PRINT ""
130 IF A=1 IF B=1 IF C=1 THEN 9950
140 IF A=2 IF B=2 IF C=2 THEN 9950
150 IF A=3 IF B=3 IF C=3 THEN 9950
160 IF A=4 IF B=4 IF C=4 THEN 9950
170 GOTO 9952
7000 IF KEY$ (1)="? " THEN RUN : REM      PUSH CL TO START OVER
7001 PRINT "PUSH CL TO START": GOTO 9996
8000 PRINT : PRINT : PRINT "MONEY LEFT": PRINT "   Y:" GUARTEERS"
8001 IF Y=-1 THEN CALL 17046: PRINT "OUT OF MONEY": MUSIC "/2/1/3/2/3"
8002 IF Y=-1 THEN 9995
8003 RETURN
9000 IF KEY$ (1)="N" THEN 9: REM      PUSH UP TO START OVER
9001 GOTO 9000
9950 MUSIC "#7*7*7*7*7*7*7*7*7*7": REM      NO SPACES!
9951 Y=Y+S: PRINT "WINNER"
9952 PRINT "TO START OVER PUSH UP"
9954 GOTO 9000
9995 MUSIC " "
          ": CALL 17046
9996 S= INT (15# RND (X)+0):C= INT (7# RND (X)+0)
9997 SHAPE =S: COLOR =C
9998 P= INT (31# RND (X)+0):L=15: PLOT P,L
9999 GOTO 7000
```

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LD-RES GRAPHICS

```
.....FROM EDDIE BEDNAR
1 POKE 24578,38
2 A=15: B=14: C=16: D=13: E=14
3 GOTO 20
5 A=A+1: B=B+1: C=C+1: GOTO 15
7 B=B-1: A=A-1: C=C-1: GOTO 15
8 D=D+1: E=E+1: GOTO 15
9 D=D-1: E=E-1: GOTO 15
15 IF B=0 THEN END
17 IF C=31 THEN END
18 IF E=15 THEN END
20 IF D=0 THEN END
21 CALL 17046: COLOR=7: SHAPE=15
25 PLOT A,D: PLOT A,E
30 SHAPE=6: PLOT B,E
35 SHAPE=9: PLOT C,E
40 IF KEY$(1)="N" THEN 9
45 IF KEY$(1)="S" THEN 8
46 IF KEY$(1)="W" THEN 7
50 IF KEY$(1)="E" THEN 5
55 IF KEY$(1)="=" THEN 40
60 GOTO 40
```

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.....FROM J. H. SCHARFELD

Here is a small variation of the graphic program by Ken Whitmore that was published in the Premier Issue of the Clubletter. It kind of looks like the "Burlington Mills" logo on T.V.

```
1 CALL 17046
2 POKE 24578,54
10 SHAPE = 7
15 FOR C=0 TO 7
20 COLOR = C
25 FOR A = 0 TO 15
26 FOR X = 1 TO 2:NEXT X
30 HLINE 0,31,A
31 NEXT A
32 FOR B = 0 TO 31:COLOR=C+2
35 VLINE 0,15,B
41 NEXT B
43 FOR P = 1 TO 13:NEXT P
45 NEXT C
50 GOTO 10
```



# STAR TREK (continued)

```

2710 PRINT " STAR FLEET HAS DETERMINED THAT YOU ARE TOO BLOOD-THIRSTY."
2720 PRINT " THEREFORE, IT HAS BEEN DECIDED THAT YOU WILL NOT BE ALLOWED"
2730 PRINT "TO CONTINUE ON THIS RAMPAGE OF"
2740 PRINT "KILLING POOR LITTLE DEFENSELESS"
2741 PRINT "KLINGONS!"
2742 PRINT TAB (10); "ADMIRAL WESTLAKE."
2750 PRINT " STAR FLEET COMMAND"
2751 GOTO 2820
2760 INPUT A$
2770 RESTORE
2780 IF S4>=4 THEN 2710
2790 IF A$="YES" THEN 2810
2800 IF A$<>"YES" THEN 2820
2810 S4=S4+1
2811 GOTO 350
2820 PRINT ""
2830 END

```

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## SQUARE ROOT

.....from PAUL SCHNEIDER OF ILLINOIS

```

10 INPUT "NUMBER WHOSE SQUARE ROOT YOU WANT",N
20 INPUT "YOUR GUESS ",A
30 B=(A^2+N)/(2*A)
40 IF B=A THEN GOTO 70
50 A=B
60 GOTO 30
70 PRINT "THE SQUARE ROOT OF "N" IS "B

```

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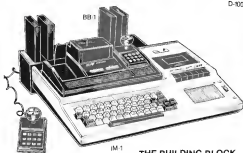
## CUBE ROOT

.....also from PAUL SCHNEIDER OF ILLINOIS

```

10 INPUT "NUMBER WHOSE CUBE ROOT YOU WANT",N
20 INPUT "YOUR GUESS",A
30 B=(A+A*(2+N)/(A^3))
40 IF B=A THEN GOTO 70
50 A=B
60 GOTO 30
70 PRINT "THE CUBE ROOT OF "N" IS "B

```

**APF****APF APF**

IM-1

D-100



### MINI-FLOPPY DISK DRIVE (D-100)

Each APF mini-floppy disk drive gives you 72,000 bytes of additional storage capacity plus loading and accessing of data within seconds. Industry standard mini-floppy connections.

### THE IMAGINATION MACHINE (IM-1)

Exciting, personal, home computer for home management, entertainment and education. User-programmable in BASIC or uses APF software cassette programs. Features 9K RAM, 14K ROM, 53-key keyboard, 32 characters x 16 line screen format, alpha numerics in up to 8 colors. Built-in sound synthesizer, built-in tape deck, 2 gauge-style hand held controllers.

### TELEPHONE MODEM (TM-150)

The APF modem (modulator/demodulator) allows you to hook up the computer to a remote terminal over telephone lines and access time-sharing services or trade programs with a compatible computer.

TM-150



### THE BUILDING BLOCK (BB-1)

This expansion device lets you use your APF Imagination Machine to its fullest degree. Easily plugged into the machine and requiring no additional power supply, it contains four universally adaptable ports for peripheral drive cartridges. For example, a cartridge, enabling hookup to any stand-alone printer or telephone modem. Ports can also hold cartridges for 8K RAM memory and mini-floppy disk drive.

PRINTER



### The EPSON MX

The MX-80, shown above, is an 80-column bidirectional printer featuring the full 96-character ASCII set with descenders for easier reading, and offers a user-defined choice of 40, 66, 80 or 132 columns.

One of the biggest breakthroughs offered by the MX-80 is the world's first disposable print head. After its 50-million-character life expectancy, you simply buy a new one for under \$30 and replace it yourself in seconds.

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